

REMARKS/ARGUMENTS

This is a preliminary amendment in a RCE Application. The Office Action mailed March 22, 2004 has been carefully reviewed. Reconsideration of this application, as amended and in view of the following remarks, is respectfully requested. The claims presented for examination are: claims 1, and 3-9.

35 USC 112 Rejection

In numbered paragraphs 4 and 5 of the Office Action mailed March 22, 2004, claims 1 and 3-9 were rejected under 35 USC 112 as being indefinite and claim 1 was rejected as vague and indefinite because it is unclear to which antibodies the pathogens bind. Independent claim 1 has been amended to specify "allowing the antibody coated beads to stick to the pathogens that are bound to the antibodies that are deposited on the spaced electrodes." This provides clarity as "to which antibodies the pathogens bind." Applicants believe that amended claim 1 and the dependent claims 3-9 comply with the requirements of 35 USC 112.

35 USC 103(a) Rejection – Setter in view of Pyle

In numbered paragraph 9 of the Office Action mailed March 22, 2004, 2003, claim 8 was rejected under 35 USC 103(a) as allegedly being unpatentable over Setter et al (U.S. Pat. 5,567,301) in view of Pyle et al (U.S. Pat. 5,821,066).

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) include "Ascertaining the differences between the prior art and the claims at issue."

The differences between the primary Setter et al reference and Applicants' invention defined by amended claim 1 includes the fact that the following elements of amended claim 1 is not found in the primary Setter et al reference:

“providing antibody coated beads,” or

“directing a sample fluid containing pathogens and the antibody coated beads past the spaced electrodes,” or

“allowing the pathogens to bind to the antibodies that are deposited on the spaced electrodes,” or

“allowing the antibody coated beads to stick to the pathogens that are bound to the antibodies that are deposited on the spaced electrodes,” or

“determining the presence of pathogens attached to the antibodies by measuring change in impedance between said pair of spaced electrodes with the antibody coated beads amplifying the change in impedance.”

While the Pyle et al reference discloses “beads,” the Pyle et al reference does not show the method of claim 1. Further, there is no suggestion or motivation to combine the primary Setter et al reference and the secondary Pyle et al reference. Under MPEP §2142, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. It should be noted that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Since there is no suggestion or motivation to combine the Setter et al and the Pyle et al references to produce Applicant’s invention, a 35 U. S. C §103(a) rejection of Applicant’s amended independent claim 1 would not be appropriate. Applicants respectfully submit that independent claim 1 is patentable and since the other claims depend from

independent claim 1, all the claims presented for examination, including claims 1, and 3-9 are patentable.

35 USC 103(a) Rejection - Vadgama et al in view of Pyle et al

In numbered paragraph 11 of the Office Action mailed March 22, 2004, claims 1, 3-7, and 9 were rejected under 35 USC 103(a) as allegedly being unpatentable over Vadgama et al (WO 98/19153) in view of Pyle et al (U.S. Pat. 5,821,066).

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) include "Ascertaining the differences between the prior art and the claims at issue."

The differences between the primary Vadgama et al reference and Applicants' invention defined by amended claim 1 includes the fact that the following elements of amended claim 1 is not found in the primary Vadgama et al reference:

"providing antibody coated beads," or

"directing a sample fluid containing pathogens and the antibody coated beads past the spaced electrodes," or

"allowing the pathogens to bind to the antibodies that are deposited on the spaced electrodes," or

"allowing the antibody coated beads to stick to the pathogens that are bound to the antibodies that are deposited on the spaced electrodes," or

"determining the presence of pathogens attached to the antibodies by measuring change in impedance between said pair of spaced electrodes with the antibody coated beads amplifying the change in impedance."

While the Pyle et al reference discloses “beads,” the Pyle et al reference does not show the method of claim 1. Further, there is no suggestion or motivation to combine the primary Vadgama et al reference and the secondary Pyle et al reference. Under MPEP §2142, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. It should be noted that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Since there is no suggestion or motivation to combine the Vadgama et al and the Pyle et al references to produce Applicant’s invention, a 35 USC §103(a) rejection of Applicant’s amended independent claim 1 would not be appropriate. Applicants respectfully submit that independent claim 1 is patentable and since the other claims depend from independent claim 1, all the claims presented for examination including claims 1, and 3-9 are patentable.

35 USC 103(a) Rejection – Van Gerwen et al in view of Pyle et al

In numbered paragraph 12 of the Office Action mailed March 22, 2004, claims 1, 3-4, 7, and 9 were rejected under 35 USC 103(a) as allegedly being unpatentable over Van Gerwen et al (WO 97/21094) in view of Pyle et al (U.S. Pat. 5,821,066).

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) include “Ascertaining the differences between the prior art and the claims at issue.”

The differences between the primary Van Gerwen et al reference and Applicants’ invention defined by amended claim 1 includes the fact that the

following elements of amended claim 1 is not found in the primary Van Gerwen et al reference:

“providing antibody coated beads,” or

“directing a sample fluid containing pathogens and the antibody coated beads past the spaced electrodes,” or

“allowing the pathogens to bind to the antibodies that are deposited on the spaced electrodes,” or

“allowing the antibody coated beads to stick to the pathogens that are bound to the antibodies that are deposited on the spaced electrodes,” or

“determining the presence of pathogens attached to the antibodies by measuring change in impedance between said pair of spaced electrodes with the antibody coated beads amplifying the change in impedance.”

While the Pyle et al reference discloses “beads,” the Pyle et al reference does not show the method of claim 1. Further, there is no suggestion or motivation to combine the primary Van Gerwen et al reference and the secondary Pyle et al reference. Under MPEP §2142, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. It should be noted that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Since there is no suggestion or motivation to combine the Van Gerwen et al and the Pyle et al references to produce Applicant’s invention, a 35 U. S. C §103(a) rejection of Applicant’s amended independent claim 1 would not be appropriate. Applicants respectfully submit that independent claim 1 is patentable and since

the other claims depend from independent claim 1, all the claims presented for examination including claims 1, and 3-7 and 9 are patentable.

35 USC 103 Rejection - Clark et al in view of Kipling et al and Pyle et al

In numbered paragraph 13 of the Office Action mailed March 22, 2004, claims 1, 3-4, 7, and 9 were rejected under 35 USC 103(a) as allegedly being unpatentable over Clark et al (U.S. Pat. 5,194,133) in view of Kipling et al (U.S. Pat. 5,374,521) and Pyle et al (U.S. Pat. 5,821,066).

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) include "Ascertaining the differences between the prior art and the claims at issue."

The differences between the primary Clark et al reference and Applicants' invention defined by amended claim 1 includes the fact that the following elements of amended claim 1 is not found in the primary Clark et al reference:

"providing antibody coated beads," or

"directing a sample fluid containing pathogens and the antibody coated beads past the spaced electrodes," or

"allowing the pathogens to bind to the antibodies that are deposited on the spaced electrodes," or

"allowing the antibody coated beads to stick to the pathogens that are bound to the antibodies that are deposited on the spaced electrodes," or

"determining the presence of pathogens attached to the antibodies by measuring change in impedance between said pair of spaced electrodes with the antibody coated beads amplifying the change in impedance."

While the Kipling et al and Pyle et al references disclose "beads," the Kipling et al and Pyle et al references do not show the method of claim 1. Further, there is no suggestion or motivation to combine the primary Clark et al reference and the secondary Kipling et al reference and the tertiary Pyle et al reference. Under MPEP §2142, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. It should be noted that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Since there is no suggestion or motivation to combine the Clark et al and the Kipling et al and the Pyle et al references to produce Applicant's invention, a 35 USC §103(a) rejection of Applicant's amended independent claim 1 would not be appropriate. Applicants respectfully submit that independent claim 1 is patentable and since the other claims depend from independent claim 1, all the claims presented for examination including claims 1, and 3-4, 7, and 9 are patentable.

35 USC 103 Rejection - Clark et al, Kipling et al, Pyle et al, and Taylor et al

In numbered paragraph 14 of the Office Action mailed March 22, 2004, claims 5, 6, and 8 were rejected under 35 USC 103(a) as allegedly being unpatentable over Clark et al (U.S. Pat. 5,194,133) in view of Kipling et al (U.S. Pat. 5,374,521) and Pyle et al (U.S. Pat. 5,821,066) further in view of Taylor et al (U.S. Pat. 5,001,048).

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) include "Ascertaining the differences between the prior art and the claims at issue."

The differences between the primary Clark et al reference and Applicants' invention defined by amended claim 1 includes the fact that the following elements of amended claim 1 are not found in the primary Clark et al reference:

"providing antibody coated beads," or

"directing a sample fluid containing pathogens and the antibody coated beads past the spaced electrodes," or

"allowing the pathogens to bind to the antibodies that are deposited on the spaced electrodes," or

"allowing the antibody coated beads to stick to the pathogens that are bound to the antibodies that are deposited on the spaced electrodes," or

"determining the presence of pathogens attached to the antibodies by measuring change in impedance between said pair of spaced electrodes with the antibody coated beads amplifying the change in impedance."

While the Kipling et al and Pyle et al references disclose "beads," the Kipling et al and Pyle et al references do not show the method of Applicants' amended claim 1. The Taylor et al reference does not show beads. Further, there is no suggestion or motivation to combine the Clark et al and the Kipling et al and the Pyle et al and the Taylor et al references. Under MPEP §2142, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. It should be noted that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Since there is no suggestion or motivation to combine the Clark et al and the Kipling et

al and the Pyle et al and the Taylor et al references to produce Applicant's invention, a 35 U. S. C §103(a) rejection of Applicant's amended independent claim 1 would not be appropriate. Applicants respectfully submit that independent claim 1 is patentable and since the other claims depend from independent claim 1, all the claims presented for examination including claims 1, and 3-4, 7, and 9 are patentable.

35 USC 103 Rejection – Van Gerwen, Vadgama, Setter, Clerc, Pyle, Taylor

In numbered paragraph 15 of the Office Action mailed March 22, 2004, claim 2 was rejected under 35 USC 103(a) as allegedly being unpatentable over Van Gerwen et al (WO 97/21094), Vadgama et al (WO 98/19153), Setter et al (U.S. Pat. 5,567,301), or Clerc (U.S. Pat. 6,133,046) in view of Pyle et al (U.S. Pat. 5,821,066) and Taylor et al (U.S. Pat. 5,001,048).

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) that are applied for establishing a background for determining obviousness under 35 USC 103(a) include "Ascertaining the differences between the prior art and the claims at issue."

The differences between the primary Van Gerwen et al reference and Applicants' invention defined by amended claim 1 includes the fact that the following elements of amended claim 1 are not found in the primary Van Gerwen et al reference:

"providing antibody coated beads," or

"directing a sample fluid containing pathogens and the antibody coated beads past the spaced electrodes," or

"allowing the pathogens to bind to the antibodies that are deposited on the spaced electrodes," or

“allowing the antibody coated beads to stick to the pathogens that are bound to the antibodies that are deposited on the spaced electrodes,” or

“determining the presence of pathogens attached to the antibodies by measuring change in impedance between said pair of spaced electrodes with the antibody coated beads amplifying the change in impedance.”

The Vadgama et al, Setter et al, Clerc et al, Pyle et al, and Taylor et al reference does not show beads. Further, there is no suggestion or motivation to combine the Van Gerwen et al and the Vadgama et al, Setter et al, Clerc et al, Pyle et al, and Taylor et al references. Under MPEP §2142, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. It should be noted that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Since there is no suggestion or motivation to combine the references to produce Applicant's invention, a 35 USC §103(a) rejection of Applicant's amended independent claim 1 would not be appropriate. Applicants respectfully submit that independent claim 1 is patentable and since the other claims depend from independent claim 1, all the claims presented for examination including claims 1, and 3-4, 7, and 9 are patentable.

Double Patenting Rejection - Application 09/738,927 (US 2002/0070114)

In numbered paragraph 17 of the Office Action mailed March 22, 2004 claims 1 and 3-9 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over


claims 12-15 of copending U.S. Patent Application No. 09/738,927 (US 2002/0070114) in view of the Kipling et al (U.S. Pat. 5,374,521) Reference.

A terminal disclaimer in compliance with 37 CFR §321(c) in the form of a DECLARATION UNDER 37 CFR §1.130(b), disclaiming the terminal portion of any patent granted on the subject application beyond the expiration date of any patent issued upon copending U.S. Patent Application No. 09/738,927 (U.S. 2002/0070114) application is enclosed.

SUMMARY

The undersigned respectfully submits that, in view of the foregoing amendments and the foregoing remarks, the rejections of the claims raised in the Office Action dated March 22, 2004 have been fully addressed and overcome, and the present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that the claims be allowed, and that this case be passed to issue. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to call the undersigned attorney at (925) 424-6897.

Respectfully submitted,



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